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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply to
Attn. of: ECL-112

3 November 2000

ACTION MEMORANDUM/ENFORCEMENT

SUBJECT: Request for Approval of a Time-Critical Removal to Eliminate Exposure to Hazardous Substances Found in Waste Ponds at the PM North West Site, Swinomish Indian Reservation, Washington

FROM: Lynda E. Priddy, Remedial Project Manager

THRU: David Croxton, Unit Chief
Superfund Site Management Section 1

TO: Michelle Pirzadeh, Associate Director
Environmental Cleanup Office

SITE ID: 5F

I. Purpose

The purpose of this memorandum is to request approval for a time-critical removal (TCR) action at the PM Northwest Site (Site). The Site is located on private property owned by P.M. Northwest,Inc., within the boundaries of the Swinomish Indian Reservation south of Anacortes, Washington. Region 10 has conducted an integrated site assessment of the Site, with the close participation of the Swinomish Indian Tribal Community (the Tribe). The objective of the TCR action recommended in this Action Memo is to excavate petroleum refinery waste sludges and materials in four former waste disposal ponds at the Site for off-site disposal or treatment. Following the TCR action, EPA will investigate any remaining exposure pathways and determine whether a non-time critical removal (NTCR) action is necessary for the Site to be protective of public health and the environment. Potentially responsible parties (PRPs) who have been identified have agreed to conduct the TCR, investigate the need for a NTCR, and conduct any NTCR that EPA selects in accordance with an Administrative Order on Consent (AOC) to be issued under section 106 of CERCLA. This Action memorandum does

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not request approval for any NTCR actions, at this time. If site investigative work conducted after the TCR indicates a need for a NTCR, another Action Memorandum will address that issue. Additionally, this Action Memorandum does not request approval of a Fund-lead removal action, which will be considered if the PRPs do not abate the endangerment pursuant to the AOC.

The CERCLIS ID number for this Site is WAD980639090.

II. Site Conditions and Background

The PM Northwest property was purchased by Plant Maintenance, Inc., in about 1957. Donald Weaver and Glen H. Kelley were owners of the company at the time. P.M. Northwest, Inc., which succeeded Plant Maintenance in 1960, acquired title to the property February 18, 1961 through a Trustee's Deed after the dissolution of Plant Maintenance.

Between 1959 and approximately 1970, PM Northwest, Inc., contracted with Texaco Inc. and Shell Oil Company to dispose of petroleum refinery wastes, including spent catalysts, effluent plant sludges, spent caustics, slop oil emulsion solids, separator sludge and other materials. In response to information requests under sec. 104(e) of CERCLA, Shell Oil Company and Texaco, Inc. provided information that waste materials generated by their petroleum refineries were transported to the Site and were disposed of at the Site, and that those waste materials meet the definition of hazardous substance. The waste materials, in bulk form and in drums, were placed in four disposal ponds (designated as North, Central, East and South) and several man-made trenches. By 1970, after the disposal activities had ceased, P.M. Northwest covered the disposal pits with soils from the Site. Since then, the property has revegetated as woodlands.

A. Site Description

1. Removal Site Evaluation

In November, 1985, EPA conducted a file review and an on-site inspection of the Site occurred as a result of conversations among EPA, the Tribe, U.S. Bureau of Indian Affairs, the Washington Department of Ecology and PM Northwest, Inc. The trip report concluded that large quantities of uncharacterized petroleum refinery wastes were disposed at the Site. From 1987 to 1995, communications continued between EPA and the Tribe, with the Tribe requesting additional investigation.

Site characterization was further defined in May 1997, when EPA conducted an emergency removal assessment, including subsurface sampling in 12 test pits within the approximate boundaries of the four known disposal ponds on the Site. The samples were analyzed for VOCs, SVOCs, metals and TPH. Numerous contaminants were detected with some exceeding MTCA cleanup

standards. Initially, EPA thought that the petroleum exclusion provision of CERCLA could complicate a response action by EPA under CERCLA authorities. Subsequent data collection at the site showing the presence of a variety of hazardous substances, and a review of information provided by the PRPs in response to information requests led the Region 10 Office Regional Counsel (ORC) to conclude that a response at this Site is not limited by the petroleum exclusion. Also, see Section VII.

In October 1997, a magnetic survey conducted by the Tribe concluded that magnetic anomalies existed in the areas of the former disposal ponds. As a result, the Tribe requested EPA assistance in locating buried metallic containers in the disposal ponds.

During 1998 and 1999, EPA conducted an Integrated Site Assessment (ISA) at the Site. EPA tasked Ecology and Environment Inc. Superfund Technical Assessment and Response Team (EPA START), under Technical Direction Document (TDD) 98-02-0016, to assess the risks associated with the site. The EPA START observed site conditions and conducted sampling activities to determine the need for a response action at the site.

The ISA involved the collection of samples from the former disposal pond areas and from target areas potentially impacted through contaminant migration. Samples collected from the former disposal pond/source areas during Phase 1 in June 1998 included aliquots from 11 excavated containers and several samples from associated sludges. A total of 36 soil, sludge, or product samples and six unfiltered groundwater samples were collected. During Phase 2 in late 1998 and early 1999, samples were collected from shallow monitoring wells, the Tribal municipal well, the perimeter of the dump site, and the wetland area east of the dump site. A total of 22 ground water, five surface water, 22 sediment and 24 soil samples were collected.

2. Physical Location

The Site is located in a heavily wooded area on Fidalgo Island near Anacortes, Washington, in Skagit County approximately one mile south-southeast of the petroleum refineries at March Point. The property is located at latitude 48° 26' 48" North and longitude 122° 31' 46" West, in Eastern half of Section 10, Township 34 North, Range 2 East. The Site and surrounding terrain generally slope downward to the northeast. A bluff located approximately 150 yards east of the disposal ponds slopes steeply down to the low-lying Swinomish Channel area. An intermittent stream flows along the base of the bluff, and the Swinomish Channel is approximately 0.5 miles east of the bluff. Padilla Bay is 2 miles north of the disposal pond area and Similk Bay is 0.8 mile west of the disposal pond area. Both bays are part of the Puget Sound.

3. Site Characteristics

The Site consists of approximately a 7-acre area in which four former disposal ponds are located, and includes surrounding areas where contaminants have migrated from the disposal ponds. The site assessment has documented that organic and inorganic contaminants are migrating from source materials in the disposal ponds and contaminated soil into the subsurface soil and shallow groundwater. The site assessment also indicates that contaminated groundwater via seeps may have contaminated wetlands water and sediments near the former disposal ponds on property owned by the Tribe. Many of these contaminants exceed regulatory or screening levels for various media.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant, or Contaminant

ISA activities included installation of monitoring wells in areas near the disposal ponds; collection of soil samples and groundwater sampling during well installation; collection of seep, surface water and sediment samples from the nearby wetlands and bluff; and sampling of disposal pond soil, sludge, and disposal drum contents. Results from ISA activities were reported by the EPA START in a draft Phase 2 Integrated Site Assessment Report, dated August 1999 (ISA Report), which included the following findings:

(a) Samples taken from disposal ponds' surface and subsurface soils, sludge and drum contents revealed that the following constituents exceeded Region 9 soil PRGs or MTCA Method A Soil Cleanup Levels:

Contaminant	Concentration (ug/kg)	Region 9 PRG Soil (ug/kg) Residential	Region 9 PRG Groundwater (ug/kg)	MTCA A Soil (ug/kg)
Benzene	94,000	670	30	500
Benzo[a]-anthracene	100,000	560		1000
Carbon Tetrachloride	2200	240	70	
Mercury	7900	23,000		1,000
Naphthalene	1,300,000	55,000		
1,3,5-Trimethyl-benzene	540,000	21,000		

Contaminant	Concentration (ug/kg)	Region 9 PRG Soil (ug/kg) Residential	Region 9 PRG Groundwater (ug/kg)	MTCA A Soil (ug/kg)
Benzo[b]-fluoranthene	5,700	560		1,000
Benzo(a) - pyrene	200,000	56		1,000
Carbazole	200,000	24,000		
Chrysene,	300,000	56,000		1,000
1,2,4-Trimethyl-benzene	950,000	57,000		
1,3,5-Tri-methyl-benzene	540,000	21,000		
1,2-Dibromo-3-chloro-propane	25,000	450		
2,6-Dinitro toluene	300,000	61,000	0.7	
n-Nitrosodi-phenylamine	1,000,000	99,000	1,000	
Tetrachloro-ethene	28,000	3,000		
Arsenic	26,000	390	29,000	20,000
Cadmium	3,800	37,000	8,000	2,000
Chromium	2,700,000	210,000	38,000	100,000
Lead	330,000	400,000		250,000

TPH, Aluminum, Antimony, Barium, Copper, Iron, Sodium, and Zinc also exceeded Region 9 PRGs or MTCA Method A Cleanup Levels.

(b) The Total Petroleum Hydrocarbon (TPH) standard under the Washington Model Toxics Control Act (MTCA) was exceeded in 33 of 37 samples collected from the identified source areas.

(c) Groundwater samples collected from monitoring wells screened above the glacial till unit approximately three to five feet below ground surface revealed concentrations of the following substances in exceedance of Region 9 PRGs (tap water), EPA MCLs or MTCA A Protection of Groundwater Cleanup Levels:

Contaminant	Concentration (ug/l)	Region 9 PRG (ug/l) Tap Water	EPA MCL (ug/l)	MTCA A Protection of Groundwater (ug/l)
Benzene	650	0.41	5	5
Benzo[b]-fluoranthene	5	0.092		
bis(2-Ethylhexyl)-phthlate	20	4.8	6	
Naphthalene	45.4	6.2	5	5
1,3,5-Trimethyl-benzene	280	12	70	
Dibenzofuran	43	24		
Chrysene	23	9.2		
Ethylbenzene	140	1,300	700	30
1,2,4-Trimethyl-benzene	570	12	70	
Methylene Chloride	23	4.3	5	5
Toluene	910	720	1,000	
Vinyl Chloride	2	0.02	2	0.2
Antimony	20.6	15	6	
Barium	2,200	2,600	2,000	
Chromium	410	110	100*	50**
Lead	7.51		15***	

* Total
** For Chromium III or VI
*** Action Level

The EPA MCLs were exceeded for Benzene, bis(2-Ethylhexyl)-phthlate, 1,2,4-Trimethyl-benzene, Methylene Chloride, Vinyl Chloride, Antimony, Barium and Chromium.

(d) The aquifer underlying the disposal ponds and the glacial till unit serves as a drinking water source. Two hundred and thirteen drinking water wells serving approximately 1700 people are located within a 4-mile radius of the disposal ponds with the nearest well within 0.5 miles of the ponds. The Skagit County Public Utilities District has two formerly used wells located approximately 0.8 miles north of the Site, and two public drinking water wells operated by the Swinomish Utility and Environmental Services Authority are located between 1 and 2 miles of the Site. See Table 7-1 of the ISA Report.

(e) Surface water samples collected from locations in and near the wetland area revealed concentrations of the following substances in exceedance of Ambient Water Quality Criteria, or MTCA B Surface Water Cleanup Levels:

Contaminant	Media Concentration (ug/l)	AWQC Human Consumption Water & Organism/ Organism Only (ug/l)	AWQC Ecological Freshwater or Saltwater CMC/CCC (ug/l)	MTCA B Surface Water (ug/l)
Arsenic	13.7	0.018/0.14	69/36**	.08
Aluminum	6790		750/87*	
Copper	47.9	1,300/--	13/9.0* 4.8/3.1**	
Iron	53,900	300/--	--/1000*	
Lead	130		65/2.5* 210/8.1**	
Mercury	0.14	0.050/0.051	1.4/0.77* 1.8/0.94**	
Nickel	31	610/4,600	470/52* 74/8.2**	

* Freshwater
** Saltwater

(f) Sediment samples collected from locations in and near the wetland area revealed concentrations of in exceedance of the MTCA Sediment Quality Standards:

Contaminant	Media Concentration (ug/kg)	MTCA SQS/CSL (ug/kg)
Cadmium	8.85	5.1/6.7

(g) Numerous other volatile organic, semi-volatile organic compounds and metals were also detected in the various media sampled at the Site. Even though these detected substances were below screening or regulatory levels, VOCs and SVOCs are not naturally occurring chemicals and should not be present. Metals can be found naturally in the environment and, in some cases, detected metals exceeded background concentrations.

5. NPL Status

This Site is not listed on the NPL. EPA does not expect to propose the Site for listing on the NPL if the time-critical and non-time-critical removals are successfully completed.

6. Maps

The attached map (Attachment 1) shows the general location of the Site, the location of the disposal ponds, the bluff and the wetlands.

B. Other Actions To Date

1. Previous actions

In November, 1985, a file review and an on-site inspection of the Site occurred as a result of conversations among EPA, the Tribe, U.S. Bureau of Indian Affairs, the Washington Department of Ecology and PM Northwest, Inc. The trip report concluded that large quantities of uncharacterized petroleum refinery wastes were disposed at the Site. From 1987 to 1995, communications continued between EPA and the Tribe, with the Tribe requesting additional investigation.

Site characterization was further defined in May 1997, when EPA conducted a removal assessment including subsurface sampling in 12 test pits within the approximate boundaries of the four known disposal ponds on the Site. The samples were analyzed for VOCs, SVOCs, metal and TPH. Numerous contaminants were detected with some exceeding MTCA cleanup standards.

In October 1997, a magnetic survey conducted by the Tribe concluded that magnetic anomalies existed in the areas of the former disposal ponds. As a result, the Tribe requested EPA assistance in locating buried metallic containers in the disposal ponds.

In 1998 and 1999, EPA conducted a two-phased ISA. Results from the ISA are summarized in Section II. A.4 above.

2. Current Actions

On March 13, 2000, EPA sent out CERCLA 104(e) requests to PRPs identified in EPA's April 7, 1998 PRP Search Report. That report identified three PRPs: Shell Oil Company, Texaco and PM Northwest, Inc. EPA, the Tribe and the PRPs have discussed the results of previous site investigations and agreed on an approach to addressing the Site contamination. An Administrative Order on Consent (AOC) and Statement of Work (SOW) for the TCR action, further site characterization and any further NTCR work are being signed by EPA, the Tribe, Shell Oil and Texaco.

C. Tribal, State and Local Authorities Role

1. Tribal, State and Local Actions to Date

This Site is on the Swinomish Indian Reservation, where state and local governments have limited authority. There is no information showing prior involvement of state or local authorities to regulate or permit the operation of the disposal site. The Administrative Order on Consent (AOC) states that EPA has notified the Tribe and the Washington Department of Ecology about the order.

The AOC includes a number of provisions concerning the role of the Tribe. EPA also has negotiated a Memorandum of Agreement (MOA) with the Tribe that further describes the working relationship, roles and responsibilities between EPA and the Tribe. The U.S. Environmental Protection Agency (EPA) is the lead agency for site cleanup activities working in consultation with the Tribe, as described in the *Superfund Memorandum of Agreement between the Swinomish Indian Tribal Community and the U.S. EPA regarding Tribal Consultation During Implementation of the Superfund Program* that Region 10 has negotiated with the Tribe. The MOA is based on a model MOA developed by Region 10. The AOC specifically identifies a number of points where EPA will consult with the Tribe before sending comments or making decisions. In addition, the AOC provides for the Respondents to reimburse the past costs of the Tribe and to reimburse the Tribe's oversight costs.

The Tribe expects to be very involved at the Site both in overseeing field work and in commenting on work products and deliverables, just as the Tribal staff were very involved in EPA's ISA. The Tribe has retained a consultant to assist in reviewing work products and deliverables under the AOC. Since EPA did not allocate resources for contractor support at the Site, EPA expects to utilize the expertise of the Tribal staff and its consultant as the work proceeds.

2. Potential For Future State/Local Response

None.

III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities

The hazardous substances present at the Site are known or suspected to cause adverse health effects. Section 300.415(b)(2) of the NCP lists eight factors that should be considered in determining whether a threat to public health or welfare of the U.S. or the environment exists and that an action should be taken to mitigate that threat. The factors discussed below are applicable to the PM NW site and thereby warrant a removal action(s).

A. Threats to Public Health or Welfare

1. Actual or potential exposure of nearby human populations, animals, or the food chain.

Samples taken from the disposal ponds and soil around the ponds indicate the exceedance of regulatory or screening levels for a number of organic and inorganic hazardous substances, primarily metals and polyaromatic hydrocarbons (PAHs). The area in which the ponds are located has been used for hunting and off-road recreation, which can lead to direct contact with contamination found at the site. Exposure to metals and PAHs may occur by inhaling airborne particles, drinking surface waters, or accidently ingesting soil or dust containing PAHs.

Exposure to PAHs can lead to symptoms of tremors, fever, gastro-intestinal distress, immune system suppression, and convulsions. Various PAHs have been identified as being co-carcinogenic, mutagenic, fetotoxic, and teratogenic. Wildlife or plant species that may be used for food or traditional Tribal practices may become contaminated. Many metals are highly persistent in forest litter soils and plants are amenable to translocating /accumulating metals from soils. Human ingestion of flora contaminated with metals could result in systemic effects to kidneys, central nervous, circulatory and reproductive systems.

2. Actual or potential contamination of drinking water supplies.

Two hundred and thirteen drinking water wells serving approximately 1700 people are located within a 4-mile radius of the disposal ponds with the nearest well within 0.5 miles of the ponds. The hazardous materials have been on-site for over 40 years. This long residence time, significantly increases the potential for groundwater to have become contaminated. Drinking water wells are in danger of becoming contaminated if breaches in the local aquitard

underlying the disposal ponds act as a conduit allowing contaminated water from the shallow aquifer to contaminate the deeper aquifer that serves as a source of drinking water.

Exposure to a number of metals found in the groundwater samples at elevated levels can cause adverse human health effects. Lead, for example, is toxic to the blood, kidney, heart, and reproductive system. Chronic exposure of children and unborn babies to low levels of lead can cause irreversible learning difficulties, mental retardation, and delayed neurological and physical development. Symptoms of exposure to arsenic include weakness, loss of appetite, nausea, vomiting, diarrhea, and pink eye. Arsenic is a carcinogen by skin contact and inhalation, and a possible carcinogen by ingestion.

3. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release.

Fifty-five-gallon drums, 5-gallon and other small containers were found buried in the disposal ponds. CERCLA hazardous substances, such as PAHs, benzene and carbon tetrachloride were found in disposal pond drums. Soil samples revealed that drum leakage had occurred. These buried disposal containers were found among pond contents and consequently serve as a source for contaminant migration and exposure to humans and local fauna and flora.

4. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

Sampling data indicate that the waste disposal ponds and areas of soil contamination contain high levels of contaminants within the first five to six feet of the soil surface and upon the soil surface. Groundwater, surface water and sediments data indicate that these contaminants may be migrating away from the source area.

B. Threats to the Environment

1. Actual or potential exposure of nearby human populations, animals, or the food chain.

Samples taken from the disposal ponds and soil around the ponds indicate the exceedance of regulatory or screening levels for a number of organic and inorganic hazardous substances, primarily metals and polyaromatic hydrocarbons (PAHs). Terrestrial plant exposures to metals contaminated soils can result in inhibited plant growth, a decrease in photosynthesis. Many metals (especially lead) are highly persistent in forest litter soils and plants are amenable to translocating /accumulating metals from soils. At relatively low

concentrations, heavy metals and PAHs can be toxic to soil microorganisms that support the base of the soil ecosystem, which can lead to soil sterility. Often flora and fauna species are adversely impacted at contaminant levels below levels acceptable for human exposure.

2. Actual or potential contamination of sensitive ecosystems.

Wetlands are located within 1 mile of the east of the ponds at the base of a bluff. Sampling of wetland surface water, sediments and seeps located on the bluff indicate that contamination of these areas may have been caused by the migration of contaminants from the ponds into the wetlands. Many aquatic invertebrates are sensitive to heavy metals exposures. Effects can include reproductive effects, decreased survival and growth of algae, and bioconcentration in freshwater algae. Ecological toxicity of PAHs are highly dependent the specific composition of the contamination. However, some common effects attributed to this group of contaminants include carcinogenic and mutagenic effects in fish and shellfish. Often flora and fauna species are adversely impacted at contaminate levels below levels acceptable for human exposure.

3. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release.

Fifty-five-gallon drums, 5-gallon and other small containers were found buried in the disposal ponds. CERCLA hazardous substances, such as PAHs, benzene and carbon tetrachloride were found in disposal pond drums. Soil samples revealed that drum leakage had occurred. These buried disposal containers were found among sludge contents of the former disposal ponds and consequently serve as a source for contaminant migration and exposure to humans and local fauna and flora.

4. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

Sampling data indicate that the waste disposal ponds and areas of soil contamination contain high levels of contaminants within the first five to six feet of the soil surface and upon the soil surface. Groundwater, surface water and sediments data indicate that these contaminants may be migrating away from the source area.

IV. Endangerment Determination

Actual or threatened releases of hazardous substances from this site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. Proposed Actions and Estimated Costs

EPA and the PRPs are entering into an AOC that provides for a complete cleanup of the site. The response will be conducted in two phases. Phase 1 would involve source removal as a time-critical removal (TCR) and Phase 2, if needed as a non-time critical removal (NTCR), would focus on investigation of the nature and extent of contamination, assessment of the potential risk associated with the contamination, evaluation of potential response actions and implementation of specified EPA response actions. The Phase 2 investigation may be conducted concurrently with Phase 1 source response actions.

A. Proposed Response under this Action Memorandum - Time-Critical Removal (TCR) Action

EPA believes that a TCR action is necessary to remove the contents of the disposal ponds, including contaminated sludges, soil, drums and drum contents, as soon as the field season permits. The AOC and SOW EPA has negotiated with the PRPs specifies that the contents of the disposal ponds will be disposed off-site or treated off-site, and that post-removal investigations will identify the extent of any remaining contamination.

B. Contribution to Remedial Performance

The purpose of the TCR action is to remove source material from the Site. The source material will either be disposed off-site or treated off-site. The source material is believed to exist in four disposal ponds. Removal of the source material will be conducted as the field season permits. Further site characterization will be performed after the TCR to determine whether additional removal actions are needed to mitigate risk to public health or the environment.

C. Description of Alternative Technologies

The TCR action involves removing the source material from the Site and disposing or treating that material at a location other than the Site. Source excavation and off-site disposal or treatment will be performed according to applicable federal and state requirements. The AOC provides for Respondents to obtain EPA's review of the off-site disposal facility.

D. Applicable or Relevant and Appropriate Requirements (ARARs)

All ARARs will be met or exceeded to the extent practicable. The MOA that is being negotiated with the Tribe provides for timely identification of ARARs by the Tribe, and the final decisions on the ARARs will be made as the work proceeds. At this time, the following potential ARARs have been identified:

Resource Conservation and Recovery Act, as amended (RCRA), 42 U.S.C. §§ 6901 et seq., and its implementing regulations codified in Chapter 260 through 265, 268, and 270 of the Code of Federal Regulations (CFR), including but not limited to the following specific requirements identified at this time:

> 40 CFR §§ 262.20, 262.21, 262.22, 262.23, 262.30, 262.31, and 262.32, relating to hazardous waste manifesting and labeling requirements prior to transportation of hazardous waste containers off-site;
>
> 40 CFR §§ 263.20 and 263.21, relating to off-site transport of hazardous waste (handling and manifesting requirements);
>
> 40 CFR §§ 265.171-265.178, relating to on-site pre-disposal handling and storage of hazardous waste in containers;
>
> 40 CFR § 265.273(a-e), relating to prevention of surface water run-on and collection and control of surface water run-off at a land treatment unit;
>
> 40 CFR Part 268, relating to off-site and on-site land disposal restrictions for hazardous wastes;
>
> 40 CFR § 300.440, relating to the CERCLA "Off-Site Rule."

Safe Drinking Water Act, as amended, 42 U.S.C. §§ 300f et seq., and its implementing regulations, including

> 40 C.F.R. Part 141, Maximum Contaminant Levels for specific contaminants in drinking water supplies.

Model Toxic Substances Control Act, as amended (MTCA), and its implementing regulations codified at Chapter 173-340 of the Washington Administrative Code (WAC) (relevant and appropriate). The relevant and appropriate requirements under MTCA identified to date include the following:

> Chapter 173-340-745 WAC, relating to MTCA soil cleanup standards Method A for TPH, SVOCs, VOCs, and inorganics.

E. Project Schedule

See Attachment 2.

F. Estimated Costs

The TCR action, further site characterization and potential NTCR work will be PRP funded pursuant to the AOC for this Site. **This Action Memo does not request approval of a Fund-lead removal action, which will be considered if the PRPs do not abate the endangerment pursuant to the AOC.**

VI. Expected Change in the Situation Should Action Be Delayed or Not Taken

If the TCR work did not occur, a threat to human health and the environment would continue and is not expected to abate through natural degradation processes. Contamination in the sludge source material may continue to migrate into the groundwater and to the nearby wetlands. The Tribe has very strong expectations about remediation of the Site and believes that a timely cleanup should occur.

VII. Outstanding Policy Issue - Petroleum Exclusion

Since the waste shipped to the site was generated at crude petroleum refineries, it is necessary to evaluate whether the CERCLA petroleum exclusion is applicable. ORC has concluded that the waste materials shipped to the site by Texaco and Shell Oil include waste materials which would be listed RCRA wastes if those wastes had been deposited after 1980. Once those waste materials are excavated, the subsequent management of those wastes may be subject to RCRA waste management requirements (e.g., RCRA-contaminated soils). In addition, the courts have ruled in other similar cases that the type of petroleum wastes found at this Site are not included in the petroleum exclusion.

VIII. Enforcement

EPA has identified three potentially responsible parties: Shell Oil Company, Texaco Inc, and P.M. Northwest, Inc. EPA, the Tribe and the PRPs have discussed the previous site investigations and agreed on an approach to addressing the Site contamination under an AOC. The Tribe is signing the AOC as a consulted governmental agency, and will be reimbursed it's past and future response costs.

However, P.M. Northwest, which is a relatively small company, has not been able to identify its insurance assets, and has been negotiating separately with Shell Oil and Texaco on how it can contribute to the cleanup. At this time, the PRPs have agreed that PM Northwest will not be a Respondent to the AOC, but will only be asked to sign an access agreement for the work. The AOC for the TCR action, further site characterization and any further NTCR work are being signed by EPA, the Tribe, Shell and Texaco.

Shell Oil and Texaco have also been conducting an additional investigation to determine whether other PRPs may have contributed waste at the Site. Although at this time no definitive information has been presented to EPA, the Region may issue additional 104(e) information requests in the future if the Respondents find information suggesting there may be other PRPs.

IX. Recommendation

This decision document presents a selected TCR action for the PM NW Site, on the Swinomish Indian Reservation, Skagit County, Washington, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. An administrative record for the Site is being prepared and will be available to the public no later than 60 days after the initiation of Site activities (as specified in the NCP).

Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for removal, and I recommend your approval by concurring below.

XIV. Approval/Disapproval

I approve the removal action recommended in Paragraph V.

_____ Date: 11/15/00

I do not approve the submitted recommendations for the following reasons, and I direct the following actions to be taken:

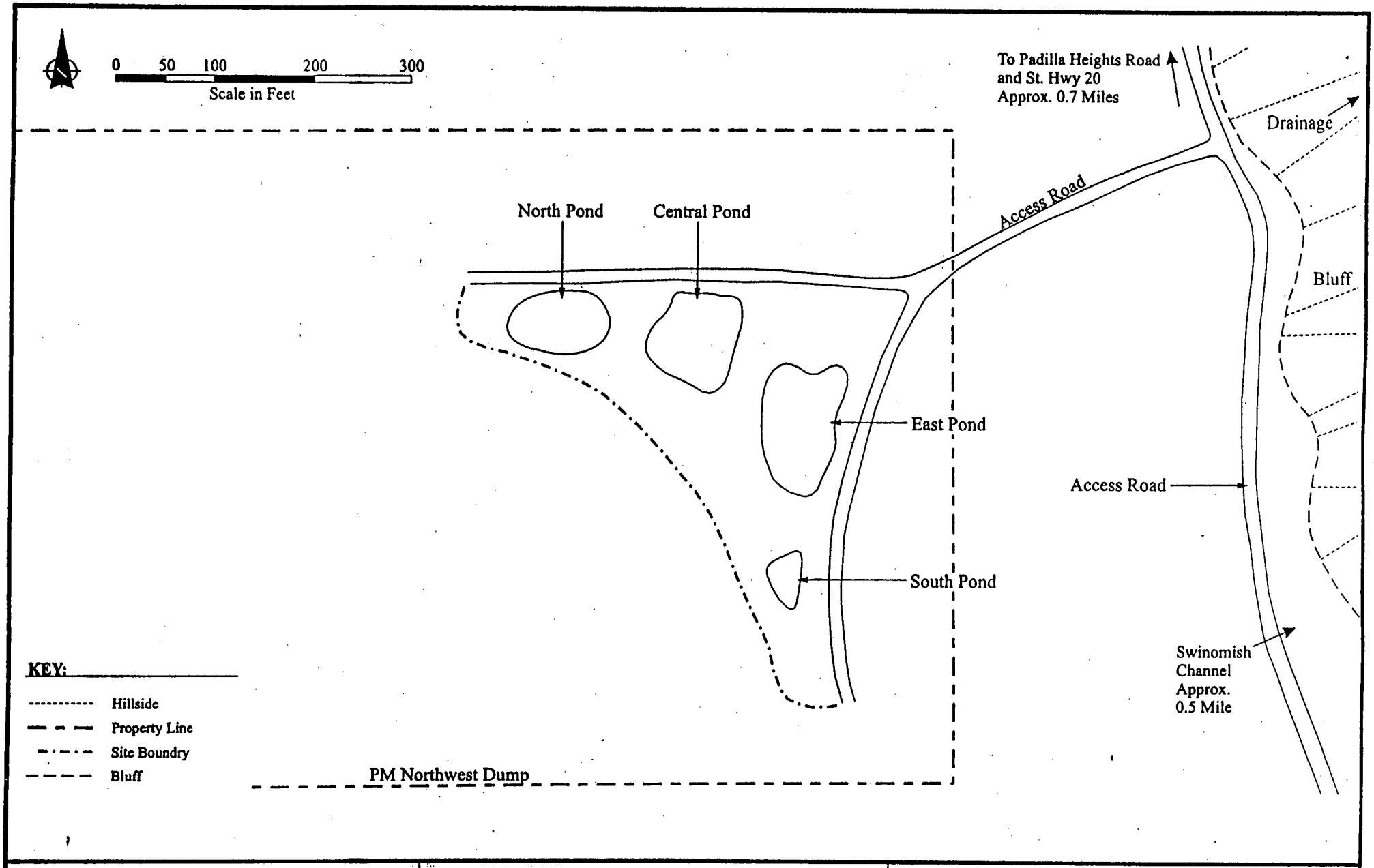
_____ Date: _____

Attachments

cc: Brian Chadoosby, Swinomish Indian Tribal Community
Lauren Rich, Swinomish Indian Tribal Community
Alan Olson, Swinomish Indian Tribal Community
Charles O'Hara, Swinomish Indian Tribal Community
Judith Wenker, Texaco Inc.
Glenn Anderson, Texaco Inc.
Tom Kearns, Shell Oil Company
Frank Fossati, Shell Oil Company
John Huntley, PM Northwest
Site File

ATTACHMENT 1

MAP



ecology and environment, inc. International Specialists in the Environment Seattle, Washington	PM NORTHWEST DUMP SITE Anacortes, Washington	Figure 2-2 PM NORTHWEST DUMP SITE MAP			
	BASE MAP REFERENCE: E&E, 1986, D. Pippenger	Drawn: AES	Date 8/4/99	Job No. CB1601SIT0	Dwg.No. CB1601 2-2

ATTACHMENT 2

SCHEDULE

ATTACHMENT 2
SCHEDULE OF DELIVERABLES

DELIVERABLE/TASK	DATE
TIME CRITICAL REMOVAL (TCR) ACTION	
1. Draft *TCR Waste Removal Work Plan*	within 45 days after effective date of AOC
2. Draft *TCR Sampling and Analysis Plan* [1]	within 45 days after effective date of AOC
3. Draft *TCR Health and Safety Plan*	within 45 days after effective date of AOC
4. Final *TCR Waste Removal Work Plan*	within 45 days after receipt of EPA comments
5. Final *Sampling and Analysis Plan* [2]	within 45 days after receipt of EPA comments
6. Final *TCR Health and Safety Plan*	within 45 days after receipt of EPA comments
7. Initiate field work[3]	within 30 days after EPA issues a Notice To Proceed (NTP) to Respondents [4]
8. Draft *TCR Waste Removal Report*	within 90 days after completion of waste removal work
9. Final *TCR Waste Removal Report*	within 30 days after receipt of EPA comments on draft
NON-TIME CRITICAL REMOVAL (NTCR) ACTION - - INVESTIGATION	
1. Draft *NTCR Site Investigation Work Plan*	within 120 days after effective date of AOC
2. Draft *Sampling and Analysis Plan*	within 120 days after effective date of AOC
3. Draft *Health and Safety Plan*	within 120 days after effective date of AOC

[1] required if sampling of any type will be conducted for EPA consideration during the TCR action.

[2] same as footnote 13.

[3] means to undertake field investigation activities, such as site mobilization, awarding field work contract, etc. Field work should be initiated in sufficient time to permit all TCR field work to be completed by November 1, 2002.

[4] EPA anticipates issuing a Notice To Proceed (NTP) approximately 30 days before a satisfactory field season is anticipated. EPA expects that the latest the NTP would be issued is June 1, 2001. A satisfactory field season will include considerations such as amount of rainfall, depth of shallow groundwater and other site condistions that may or may not be favorable to site excavation.

4. Final *NTCR Site Investigation Work Plan*	within 30 days after receipt of EPA comments
5. Final *Sampling and Analysis Plan*	within 30 days after receipt of EPA comments
6. *Health and Safety Plan*	within 30 days after receipt of EPA comments
7. Initiate site work	within 30 days after EPA issues NTP[5]
8. Draft *NTCR Site Investigation Report*	within 90 days after completion of field work
9. Final *NTCR Site Investigation Report*	within 30 days after receipt of EPA comments on draft
10. Draft *Identification of Potential NTCR Alternatives Technical Memorandum*	within 90 days after completion of field work or may be submitted with Task 12[6]
11. Final *Identification of Potential NTCR Alternatives Technical Memorandum*	within 30 days after receipt of EPA comments on draft
12. Draft *Selection and Evaluation of NTCR Alternatives Technical Memorandum*	within 60 days after completion of NTCR, Task 8
13. Final *Selection and Evaluation of NTCR Alternatives Technical Memorandum*	within 30 days after receipt of EPA comments on draft

NONTIME CRITICAL REMOVAL (NTCR) ACTION - - RESPONSE ACTION

1. Draft *NTCR Action Work Plan*	within 30 days after effective date of *EE/CA Approval Memorandum*
2. Draft *Sampling and Analysis Plan*	within 30 days after effective date of *EE/CA Approval Memorandum*
3. Draft *Health and Safety Plan*	within 30 days after effective date of *EE/CA Approval Memorandum*

[5] EPA will issue a Notice To Proceed (NTP) 30 days before a satisfactory field season is anticipated. A satisfactory field season will include site considerations that are relevant to the field work anticipated. Certain site investigation work may be started before the beginning of the summer field season depending on the nature of the investigative tasks to be accomplished.

[6] As agreed by EPA, the Tribe and the Respondents. The deliverable developed for Task 10 can be submitted in one of two ways: (1) as a stand alone document submitted 90 days after the completion of field work or (2) delayed, beyond the 90 days, until Task 12 is completed and the Task 10 deliverable would be submitted in the deliverable for Task 12.

4. Final *NTCR Action Work Plan*	within 30 days after receipt of EPA comments on draft
5. Final *Sampling and Analysis Plan*	within 30 days after receipt of EPA comments on draft
6. Final *Health and Safety Plan*	within 30 days after receipt of EPA comments
7. Initiate response work	within 30 days after EPA NTP
8. Draft *Site Completion Report*	within 90 days after completion of field work
9. Final *Site Completion Report*	within 30 days after receipt of EPA comments on draft

Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for removal, and I recommend your approval by concurring below.

XIV. Approval/Disapproval

I approve the removal action recommended in Paragraph V.

_____ Date:_____

I do not approve the submitted recommendations for the following reasons, and I direct the following actions to be taken:

_____ Date:_____

Attachments
cc: Brian Chadoosby, Swinomish Indian Tribal Community
Lauren Rich, Swinomish Indian Tribal Community
Alan Olson, Swinomish Indian Tribal Community
Charles O'Hara, Swinomish Indian Tribal Community
Judith Wenker, Texaco Inc.
Glenn Anderson, Texaco Inc.
Tom Kearns, Shell Oil Company
Frank Fossati, Shell Oil Company
John Huntley, PM Northwest
Site File

Initial	LEP	NM	JK	DAC	CM
Name	Priddy	McAllister	Kowalski	Croxton	Field
Date	11/3/00	11/3/00	11/13/00	11/6/00	11/7